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THE UNIVERSITY OF ALBERTA

A STUDY OF GROUP ENVIRONMENTS
FOR PRESCHOOL CHILDREN

by



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A THESIS

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ABSTRACT

Psychologists have come to view development as a reorganization of psychological structures resulting from interaction between the child and his environment. The purpose of this thesis is to examine the factors affecting preschool children's interactions with their group.

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "A Study of Group Environments for Preschool Children" submitted by Kathleen Isabelle Martha Robinson in partial fulfilment of the requirements for the degree of Master of Education.

ABSTRACT

Psychologists have come to view development as a reorganization of psychological structures resulting from interactions between the child and his environment. The purpose of this thesis is to examine the factors affecting preschool children's interactions with their group environments.

It was theorized that the way in which children interact with their environment may be assessed in terms of the dimensions of direction, involvement, theme, and space and time. The level of interaction is manifested in the manner in which the physical setting is used, in the activities which make up the program, and in the interpersonal relationships within the group.

The sample selected consisted of 87 group programs attended during the day, on one or more days from Monday to Friday, by preschool children. A trained interviewer visited each of the participating programs and stayed for one complete session, usually two hours. After observing the program, the interviewer completed one form while speaking to the director and another by memory after leaving the setting. The data was analyzed using analysis of variance and Pearson product moment correlation coefficients. The null hypotheses were rejected at, or beyond, the .05 level of confidence.

The level at which the children interacted with their environment in a group setting was found to be related to the type of program and how the director expressed her enjoyment of children. In addition,

the level of interaction increased with an increase in the variety of equipment in the setting, the size of the setting in square feet, the number of square feet per child, the rating of the use made of the available space, and the rating of the pleasantness of the setting. The level of interaction was unrelated to the training of the director, the attitude of the director towards her job, the frustrations expressed by the director, the cost per month to the parents, the total number of children in the setting, and the size of the children to adult ratio.

The manner in which the teacher interacted with the children was highly related to the manner in which the children interacted with the teacher and with each other. Settings which fostered high levels of interactions with one aspect of the environment tended to foster high levels of interaction with all aspects.

The major implication of this thesis is that in selecting a group setting which will foster interactions between preschool children and their environment, the following qualities are desirable: a large variety of equipment and activities, a large setting with abundant space for each child, pleasant well used space, and a director who expresses an active enjoyment of children. All of these qualities are easily ascertained and hence these points should be useful both to parents and to licensing agencies.

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CHAPTER I

INTRODUCTION

The direction in which education starts a man will determine his future life. (Plato)

So wrote Plato twenty-three centuries ago and yet it is only within the last century that society has taken an appreciable interest in the early education of the child. Kessen provides the main reason for this when he says:

It was only yesterday in human history that the majority of children could be expected to live beyond their fifth year . . . it is clear that the medical revolution of the past two centuries has permitted high valuation of the infant by saving his life (Kessen, 1965, p. 7, 31).

Society could not afford an interest in a person who could not be expected to live and give a return on the investment. In medieval society the idea of childhood did not exist and the child was seen simply as an ill-formed miniature adult.

Over the next few centuries several new attitudes toward the child evolved: first the child became an object to be coddled, then fit for redemption, then valuable enough to be cared for, and finally a unique and precious thing.

As Rousseau stated in his Law of Functional Autonomy the child became a real, and separate, part of society:

. . . the child is not, considered in himself an imperfect being; he is a being adapted to circumstances which are appropriate for him, his mental activity is appropriate to his needs, and his mental life is integrated (Kessen, 1965, p. 73).

With the publication of Darwin's Descent of Man the child became a unique part of scientific endeavor and the idea of development came to

dominate the science of man.

In the field of child development there have been three broad streams of thought which vary from generation to generation but which start from the same assumptions.

The "maturationist" stream, commencing with Rousseau, holds that what is most important in the development of the child is that which comes from within him. The pedagogical environment should be one which creates a climate to allow inner abilities and virtues to unfold and the inner faults to come under the control of the inner virtues.

The "cultural training" stream, stemming from Locke to Skinner, assumes that what is important in the development of the child is his learning of the cognitive and moral knowledge and rules of the culture and that education's business is the teaching of such information and rules to the child through direct instruction.

The third stream of thought, the "cognitive-developmental" or "interaction" view is based on the premise that the cognitive and affective structures which education should nourish are natural emergents from the interactions between the child and the environment under conditions where such interactions are allowed or fostered. In his book How Gertrude Teaches her Children Pestalozzi claims

. . . there is no remedy for our present and future overturn in society, morality and religion except . . . to turn back from the superficiality, incompleteness, and giddy-headedness of our popular instruction and to recognise that sense-impression is absolutely the foundation of all knowledge (Kessen, 1965, p. 101).

Pestalozzi's principle that learning is based on the activity of the child can be traced through Froebel, Montessori, and Dewey. Kohlberg considers the implications of Piaget's work for education as giving greater precision to the general functional-genetic approach to education presented by Dewey (Kohlberg, 1968). This interactional interpretation of Piaget is evident in the following excerpt from Piaget:

The goal in education is not to increase the amount of knowledge, but to create the possibilities for a child to invent and discover (Ripple & Rockcastle, 1964).

According to Evans (1971) current early childhood educational theorists emphasize active, self-discovery, inductively oriented learning experiences whereby a child is able to perform transformations on materials from the environment. Where direct teaching is necessary, it follows rather than precedes periods of manipulation and exploration. Experiences are arranged which capitalize upon and facilitate stage-relevant thinking operations but simultaneously accommodate the child's present intellectual style.

In summarizing studies of the effects of teacher behavior upon child behavior, Swift (1964) concludes:

In general, the research findings indicate that techniques which take into account the child's own interests and goals, which build on these to further educational goals . . . will be most effective in promoting learning. In order to carry out these techniques the teacher must be child-centred in her approach, aware of the child's needs, and willing to adapt to his goals while pursuing her own (educational goals) for him (Swift, 1964, p. 268).

Persons working with young children would appear to be convinced, in theory, that a developmental child-centred approach is of value:

Moustakas and Berson (1956) in a survey of 300 nursery schools and day nurseries found that in theory most leaders were child-centred; Klein and Novotney (1971) found that most directors of some 200 day nurseries rated development areas to be most important in their program. However, on questions involving practice, Moustakas and Berson found most leaders to be authoritarian. In observing the programs, Klein and Novotney found the programs to be largely teacher-directed with little attempt made to individualize activities. Prescott and Jones (1956, 1971) found some preschool settings child-centred whereas others emphasized teacher-directed group activities and close control.

Evans found the most unifying aspect of preschool programs to be the commitment among the staff of these programs to the positive and total growth of the child:

This includes a firm belief in the need for a benevolent and responsive learning environment (Evans, 1971).

Similarly, Kohlberg states that response pattern development in the child is primarily determined by the structure and association of events in the environment. Swift indicated a real need to study the relationship between the environment and teacher behavior and child behavior.

As society has come to recognize that the child develops, the problem has become one of facilitating this development. Contemporary psychologists tend to view development as a process which is neither direct biological maturation nor direct learning in the usual sense, rather it is a reorganization of psychological structures resulting from interactions between the child and his environment. Hence from

a developmental point of view, society has become interested in the environments of young children. As the number of group programs for preschool children increases so does the need to examine factors affecting children's interactions with their environment.

Within a framework of the components of group environments, Chapter II reviews some of the literature concerned with the environments of young children. From this review is developed a model for viewing children's interactions with their environments and in Chapter III relationships between the factors in the environment and the children's interactions are hypothesized. As reported in Chapter IV, these hypotheses were tested by gathering information about group environments of preschool children in Edmonton and by observing the children's interactions with these environments. Chapter V gives some conclusions and implications regarding the factors which influence preschool children's interactions with their group environments.

CHAPTER II

A REVIEW OF THE RELATED LITERATURE AND A THEORETICAL ORIENTATION

Factors Influencing the Group Environment

According to English and English (1958) an environment is defined as:

The sum of the external conditions and factors potentially capable of influencing an organism (English & English, 1958, p. 182).

In order to study the environment of preschool children the dynamic factors acting within the group must be identified. Each group, whether child or adult, exists within a society which exercises normative influences upon the group. These normative influences are modified by the influences of the individuals who make up the group. Each group meets within a physical setting which largely determines the activities which take place within the group. The interactions in the group resulting when people communicate, are the final factors acting upon the environment which in turn influence further interactions.

These four factors, normative, individual, physical, and interactional, are at once conceptually independent and phenomenally interactive. Each will be examined briefly.

Normative Factors. Each society has its characteristics, mores, and values which are reflected in its institutions, roles, and

goals. In Canadian society the family is viewed as the main institution for preschool education. Most group programs for children under six years of age are privately rather than publicly funded (Canadian Committee on Early Childhood, 1972). The organizing institution may be expected to exert normative influences upon the group.

Within a society, social class also affects the group. Bruner (1971) makes the point that the language of upper-class children is decontextualized which allows them to transcend restrictions of locale and affiliation when communicating with others. The language of lower-class children is more tied to place and affiliation, serves the interests of concrete familiarity rather than generality, and is more tied to finding than to seeking.

Another normative influence on a group of preschool children is the view taken of the child and his development. In their summary of the aims of preschool education, Sears and Dowley (1963) found that in addition to acquiring concepts, language, and a sense of self, the preschool child is expected to learn to get along with others, to manage his emotional reactions, to understand adults, to play, to share, to respect personal property and the rights of others, and to practice social techniques. Erikson (1950) speaks of the ages three, four, and five as time when the child tries to find out what he will be like when he grows up. At this age, the child needs the props and the opportunity to role play unself-consciously and uninterrupted, as well as the adult models with whom to identify (Bandura and Huston, 1961). The educational background of the adults involved could be expected to

influence their view of the child and their role in the preschool setting and hence also exerts a normative influence.

Many of the behaviors in the group are determined by the role the individuals occupy and not by the individuals themselves. Similarly, many of the goals within the group, both affective and cognitive, are predetermined by the institution using the values esteemed by society. In turn the program of activities with the group is determined to a large extent by these goals.

Katz (1970) outlined three basic role models followed by teachers of young children: the maternal model, the therapeutic model, and the instructional model. The maternal model, acting as a mother substitute, is concerned with keeping the child safe, comfortable, busy, happy, and "well behaved". The therapeutic model places major emphasis on helping the child express inner feelings, work out tensions and resolve whatever inner conflicts may be impeding his development. The instructional model emphasizes the deliberate transmission of information, knowledge, and skills through structured programs.

In their classic study Lewin, Lippitt, and White (1939) investigated three styles of leadership and found three corresponding behaviors. In a laissez-faire organization in which the leader was a non-participant in decision making, the group became bored and dissatisfied and little was accomplished or produced. An autocratic organization in which all decisions were made by the leader produced an apathetic hostile group in which there was little free and easy socialization. A democratic organization in which the leader offered

assistance but in which the decisions were group decisions produced members who were friendly, group minded, work minded, and showed initiative and a high level of frustration.

After interviewing day-care teachers, Prescott (1964) classified the aims of their activities three ways: custodial, adult-centred, and child-centred. In the custodial role the teacher is concerned mainly with physical needs of the children. Education opportunities are not teacher planned. When acting in the adult-centred role, the teacher fosters behaviors valued by adults, be they educational skills or etiquette, without consideration of experiences which develop the child's autonomy and initiative. In a child-centred role:

The teacher clearly relates her goals to the self-initiated activities of children for the purpose of expanding and supporting their experiences and contact with the world (Prescott and Jones, 1967, p. 46).

Using nursery school children Thompson looked at the effects of teacher behavior upon child behavior. Two matched groups of children, taught by the same teachers, were exposed to contrasting types of teacher behavior over a period of eight months. In one group the teachers adopted an impersonal and uninvolved attitude; they gave information and help only upon the specific request of the child. In the other group, the teachers helped the child in his relations with other children and in his use of play materials to the extent appropriate to his needs.

Significant differences favoring the group receiving greater teacher involvement were found with respect to ascendance, social

participation, leadership and constructiveness. Increases were noticed in each of these areas. No significant differences were noticed with respect to intellectual growth or nervous habits.

Hess and Shipman (1965) studied communicative styles of mothers. They classified mothers' language usage as being restrictive (limited, stereotyped utterances conveying little information) and elaborate (detailed statements conveying more information or expressing ideas which are generally individualized to the listener). They found that within the elaborate language code the mother provided a greater verbal mediation of her world, provided greater labeling and categorizing of objects and thought for her child, and encouraged him to do the same. Hess and Shipman felt that this style of mother communication provided the child with language as a tool for problem solving and helped him to delineate alternative solutions to problems. The restrictive code, on the other hand, used language to convey only a minimum of information. A mother using this code gave little indication of alternatives and may even have discouraged the use of language in problem solving. They concluded:

. . . it would seem that the goal of early education is to promote the development of strategies or structures for dealing with information, rather than merely transmitting a supply of concepts, information, and mental skills (Hess and Shipman, 1965, p. 103).

In an extension of Hess and Shipman's ideas to the preschool situation, Smothergill, Olson, and Moore assessed the influence of an elaborative versus a nonelaborative teaching style on children's nursery school behavior. They concluded that nursery school teachers

who teach elaboratively and respond positively to their children's elaborate verbalizations have children who behave more elaboratively in their classrooms, and, in some instances at least, approach problem-solving tasks more elaboratively than children trained in nonelaborative ways.

Siegel and Kohn (1959) found that children in a play situation exhibited more aggression in the presence of a permissive adult than when no adult was present. Perhaps the children see the adult's lack of response as approval. In her summary of the role of the adult in the preschool setting Swift (1964) claims that the preschool child is still dependent upon adults for approval, direction, and attention. The child seeks clues to the adult's judgment when it is not obvious and may incorrectly interpret non-explicit instructions. Guidance from the teacher in defining the situation more realistically and communicating the values which she seeks to reinforce will make the situation a more effective learning experience for the child. An active adult gives a child a sense of security which is needed to approach new and frightening experiences.

By virtue of the group being part of an institution within society, the group environment is influenced both by society and the institution. The literature indicates that the young child needs active direction from adults, not only to care for his physical and emotional well being, but to help him to develop language, cognitive structures, and social skills. This view is adhered to in varying degrees and hence different sponsoring agencies define different

roles for the adults and children as well as different programs of activities.

Individual Factors. The fact that roles are occupied by individuals brings a whole host of diversifying influences into play. Each person within the group has different potentials and needs and as a result reacts in a unique way to his surroundings. These unique reactions on the part of the leader and members of the group affect the group environment.

For example, two teachers may follow the same role model but their styles of instruction may be quite different. One may be cold and egocentric whereas the other may be warm and understanding.

In his observations of ten nursery groups, Reichenberg-Hackett (1962) concluded that it is the personality of the teacher, her outlooks, and convictions that constitute the most important single factor in the shaping of the child's nursery experiences.

A study by Walberg (1968), using high school students, showed that their dimensions of environment were predictable from teacher personality. Walberg and Anderson (1968) concluded that it is not the identification with the group that correlates with learning but the perception that the class is personally gratifying and without hostilities among its members.

In a study involving sixth grade students, Flanders, Morrison, and Brode showed that students' attitude changes towards the class were related to the personality variable of internal-external control and the teacher's use of praise.

Work by Harvey and his associates has indicated that classroom environment is related to the value system of the teacher. For example, a System 1 Teacher (a high tendency towards absolutism) was likely to foster a highly structured, autocratic, cold, formal environment. On the other hand, a System 4 Teacher (abstract and open-minded) was likely to produce an environment higher in affective measures and which fosters ingenuity and creativity.

Therefore, the group environment is affected both by the characteristics of the individuals comprising the group and by their individual interpretation of the roles and programs defined by the institution.

Physical Factors. Physical surroundings give cues as to the behavior expected in a setting. Kritchevsky and Prescott (1969) conducted a three year study of space in day care centres. On the assumption that life is experienced as being more satisfying and interesting, and therefore more meaningful and conducive to growth when space invites one to do what one wants to do, the facilitative type of space was considered to be of high quality:

When teachers select goals for children in the light of what can be called the "developmental push," and develop space to support these goals, children are involved and interested in their play. Teachers then have time to observe children, or to interact without unnecessary interruption, and therefore will have opportunity to know and teach children as individuals (Kritchevsky and Prescott, 1969, p. 5).

The higher the quality of space in a centre, the more likely were teachers to be sensitive and friendly in their manner towards children: to encourage children in their self-chosen activities; and to teach consideration for the rights and feelings of others. Where spatial

quality was low children were less likely to be involved and interested; teachers were more likely to be neutral or insensitive in their manner; teachers used larger amounts of guidance and restriction; and teachers taught arbitrary rules of social living. They also found that in a congested space the child's attention was likely to be distracted.

In summarizing studies by others, Swift (1964) found that conflicts between children were more numerous where play space was restricted. Markey (Swift, 1964) found greater imaginative play occurred under conditions of greater play space.

Prescott and Jones (1971), in reporting some of the results of their seven years of studying day care centres, concluded that whether a centre had a child-centred or a teacher-directed program was associated with the quality of the physical space and the centre's size. Centres in which the teachers' manners were rated as sensitive and the children's involvement in the activities was "high" were most often those that were of moderate size (30 to 60 children), that had good physical space as indicated by organization and amount to do per child, and that were staffed by teachers with some special training in early education. When a setting was not optimal for certain kinds of activities and behavior, only a highly skilled and highly motivated adult could bring about these behaviors.

The group environment is a function of both the building and the contents of the building in which the group meets. The activities within the group depend upon both the room and the location and

arrangement of the available equipment. These activities, as well as the atmosphere generated by the physical setting itself, influence the environment.

Interpersonal Interaction Factors. Many activities within the preschool group involve the adult and one child or more or else groups of children. Hence, the fourth factor to consider is interpersonal interaction, both verbal and nonverbal.

By analyzing verbal interactions in nursery schools and kindergartens H. H. Anderson, in 1937, triggered a series of naturalistic studies of teachers' methods of interacting with children and the resulting effects of these methods. H. H. Anderson, Withall (1949, 1969), Perkins (1950), Flanders (1965) and many others have shown a good deal of similarity in their work. They generally divide interaction behaviors into dominative (teacher supportive, teacher centred, or direct influence) and integrative (learner supportive, student centred, or indirect influence). Table 1 lists the types of interaction generally ascribed as dominative or integrative.

Dominative behavior tends to restrict the child's activities and leads to distracted, aggressive, noncooperative conduct. Integrative behavior expands the child's opportunities for self-directive and cooperative behavior with his peers and the teacher. These researchers have shown that teacher contacts set a pattern of interaction that spreads throughout the classroom.

Table 1
The Classification of Ways of Interacting

Dominative	Integrative
Expresses or lectures about own ideas or knowledge.	Accepts, clarifies and supports the ideas and feelings of the students.
Gives directions or orders.	Facilitates, praises and encourages.
Criticizes or deprecates pupil behavior with intent to change it.	Asks questions to stimulate pupil participation in decision making.
Justifies own position of authority.	Asks questions to orient pupils to school work and to assist in gaining insight.

Little controlled research has been done in the area of non-verbal interaction in groups. It is generally acknowledged that people are sensitive to such clues as a taut face, narrowed eyes, tense shoulders, uneasy stirrings, mutterings, asides, body orientations, eye contact, shiny eyes, smiles, tone of voice, facial expressions, and so on (Withall, 1949; Gibb, 1960).

A person's body movements or absence of movements communicate messages to others continuously. Sometimes these nonverbal communications are accompanied by statements and the resulting message depends both upon the movements and the statements. Within the preschool group these interactions between the adults and the children and among the children themselves potently influence the environment.

Levels of Children's Interaction with Their Environment

In this examination of the four factors influencing the group environments of preschool children it becomes evident that children interact with their environments at different levels. These levels vary along four axes: direction, involvement, theme, and time and space.

Direction. Children's interaction with their environment may be non-directed with no discernible goal:

Miss Brown washes Tommy's hands before lunch time and warns him about jumping off the doll house; Tommy looks at a book for a few minutes, fights over a truck, tries to do a puzzle, and waits for his mother to come.

Their interaction may be teacher directed towards group goals:

Under the careful guidance of Mrs. Jones all of the children complete an exercise aimed at improving visual discrimination because it prepares them for grade one.

Or their interactions may be teacher facilitated with a goal set by each child:

As Mrs. Smith is about to begin to read a story to the group, Sally suggests a puppet show instead; Mrs. Smith agrees that a puppet show would be fun, puts away her book, and nods her encouragement to shy Jimmy as he adds to the plot of the show.

The level of the direction of the interaction is influenced by the type of sponsoring agency, the education of the adults involved, the adults' view of the child, and the role models followed: by the personalities of the adults and children; by the quality of the physical space; and by the method of interpersonal interaction used by the members of the group.

Involvement. When interacting with their environment, the children's level of involvement may vary from "just waiting" to much spontaneous activity making use of their whole bodies, elaborate speech, and a range of emotions. Some interactions make minimum use of the room and facilities available whereas others exploit them to the fullest.

Miss Brown indifferently watches Tommy quietly push a car back and forth on the floor.

Mrs. Jones bends over to listen to Mary excitedly tell her about the book at which she is looking.

After a great deal of discussion, planning, and searching for equipment, Sally and Ellen are enthusiastically building a paper chain; Mrs. Smith sits down on the floor with them and they all attempt to figure out a way of making the chain completely circular so it may be used as a room decoration.

As Thompson and others have shown the involvement of the adult influences the level of the involvement of the children. Other research indicated that the quality of the physical space and the adult's method of interpersonal interaction also influence the children's level of involvement when interacting with their environments.

Theme. Some series of interactions of children with their environment appear to be unrelated, that is, they form no sequence. Others indicate that the individual or the group has an idea or plan which is being developed.

The children paint a picture of themselves and then Miss Brown calls them to play Farmer in the Dell.

Mary has just returned from Hawaii bursting to show the group her Hawaiian costume; the children suggest that they make paper leis and skirts to wear while they dance to the Hawaiian record Mary brought back for them.

After a week of the group talking about farms and farmers growing wheat which is made into flour, Mrs. Smith reads the group a story about "Baker Bill;" the next day the group goes on a field trip to a bakery and when they come back they make baker's hats.

The thematic level of children's interactions with their environment depends upon influences such as the educational background of the adults, the adult's view of the child, the quality of the physical space, and the extent to which the adult's manner of interpersonal interaction allows the children to carry through with their ideas.

Time and Space. Some interactions between children and their environment are in a here-and-now sense only. In other interactions the children use the facilities in a manner which serves to increase their understanding of the world outside of the group's meeting place.

Tommy finally gets the tricycle away from Bill only to have Joey demand the tricycle.

Mary enjoys trying to drive the tricycle through figure-eights at different speeds.

The tricycle becomes a bus for Jimmy and he delivers Sally and Ellen all around the playground.

The time and space level of interaction is a function of the social class of the children, the adult's view of the child, the role model of the adult, the quality of the physical space, the dominative methods used by the adults, as well as the personality and value systems of both the adult and the children.

For children directing themselves, highly involved with a theme, the dimensions of time and space are extended. The adult's role becomes one of facilitating, rather than directing, the

children's interactions with their environments.

Summary

Within the group environment normative, individual, physical, and interpersonal interactional factors are operating which influence the children's level of interaction with their environment. This level of interaction may be assessed in terms of the dimensions of direction, involvement, theme, and space and time. These levels of interaction are manifested in the manner in which the physical setting is used, in the activities which make up the program, and the interpersonal relationships within the group.

CHAPTER III

METHODOLOGY

Background to the Study

In January, 1972 The Canadian Committee on Early Childhood (OMEP) undertook a major research project involving the total population of agencies and individuals in Edmonton who care for preschool children in the absence of their parents during the daytime from Monday to Friday. The project was an attempt to describe all manner of child-care settings and agents and to briefly analyze the nature of the children's interactions with their environments. This thesis was based on the data collected for the latter part of the project. In view of the limiting of the thesis to group environments, the data concerning babysitter settings was excluded from the analysis.

The Population

The population of this thesis was all group programs attended sometime during the day, on one or more days from Monday to Friday, by children under school entering age. By this definition, eight separate categories of programs were available to preschool children in Edmonton: playschools, day nurseries, nursery schools, school board administered kindergartens, privately owned kindergartens, one-activity programs, bowling alleys and curling rinks, and a school hospital. A brief definition of each category follows below.

A playschool is a cooperative recreational play program serving four-year old and five-year old children. Parents participate in the program. Each program is given on-going supervision by the Edmonton Parks and Recreation Department. These programs operate two-and-a-half hour sessions, three days a week.

A day nursery or a day care centre offers an all-day service to children whose parents are both away from home during the day and is licensed by the Department of Health and Social Development. Some centres are city-subsidized and administered, some are privately owned, and some are operated by organizations. While some private centres give care to infants, subsidized centres limit their services to children two-and-a-half years old and up.

A nursery school is usually for three-year olds and four-year olds. The operator need not be a teacher but usually has training or experience in group work with young children. Nursery schools are licensed by the Department of Health and Social Development and usually operate two or two-and-a-half hours, three-to-five days a week.

A kindergarten is a two or a two-and-a-half hour daily program offered to children immediately preceding their entry into grade 1. Kindergartens must be registered with the Department of Education and employ teachers holding teaching certificates. Programs may be administered by a school board or by a private individual or company.

A one-activity program focuses on one type of activity such as arts and crafts, gymnastics, swimming, music, or story telling. Programs are usually held on a weekly basis and may be organized by

the Edmonton Parks and Recreation Department, the Edmonton Public Library, or the YMCA/YWCA.

Bowling alleys and curling clubs provide care for children whose mothers play in a daytime league. These services are often organized by the league members themselves but take place on the bowling alley or curling club premises.

The school hospital is a resident and outpatient treatment centre for children with physical or behavioral handicaps. A multi-disciplinary approach of diagnosis and treatment is used. The programs included in this study were nursery schools, kindergartens, and behavioral problem groups for young children.

The Sample

Approximately thirty percent of the programs in each category of the population were randomly selected and contacted by phone, by letter, or in person to request permission for an interviewer to visit one session of the program with the intention of preparing a booklet of information for parents outlining preschool facilities in Edmonton.¹ The response was generally enthusiastic with the only refusals from a private kindergarten company, which eliminated four of the selected kindergartens, and from one bowling alley. As shown in Table 2, The Sample of Group Environments, eighty-seven programs were visited.

¹Child Care in Edmonton. Edmonton: Canadian Committee on Early Childhood, 1972.

Table 2
Sample of Group Environments

Type of Environment	Number in Sample
Playschools	21
Day Nurseries	15
Nursery Schools	12
Kindergartens	
School Board Administered	12
Privately Owned	9
One-Activity Programs	8
Bowling Alleys, Curling Rinks	6
School Hospital	4
Total	87

Selection and Training of the Interviewers

The interview team of fifteen men and women was selected on the basis of personal interviews. Specialists in early childhood education were specifically avoided on the premise that the teachers might find them intimidating. Among the interviewers were five housewives, two of whom visited the majority of the settings; six students from Grant MacEwan Community College; and four students from the University of Alberta.

All interviewers received from six to nine hours of orientation and training. Close contact, both by phone and by luncheon meetings,

was maintained in an attempt to obtain reliability in scoring among the interviewers. For a more complete description of the training of the interviewers the reader is referred to Child Care in Edmonton, Part II, (1972).

The Collection of the Data

One interviewer visited each of the participating programs and stayed for one complete session, usually two hours. The only exception was in day nurseries where the interviewer visited for one morning or one afternoon. After observing the program, the interviewer talked to the agent and completed an Interview Questionnaire (See Appendix A). A checklist (See Appendix B) was filled in by memory immediately after the visit. The reasons for not making the checklist visible during the visit were threefold. The care agent would feel less threatened, the agent did not focus in on the checklist but acted with spontaneity, and the interviewer was programmed to focus on the environment as it was happening.

The Interview Questionnaire

The interview questionnaire was drawn up with seven areas of interest:

- a) the number and ages of the children involved,
- b) the training, age, and first language of the care agent.

The training of the care agents was categorized as follows: university graduate, university (no degree), in-service course, parks and recreation course, nurse and practical experience,

- c) the attitudes of the care agent. The following three

questions were used to give an indication of the agent's attitudes: "What is it like managing the lives of (looking after, teaching) children?" The care agents responded to this in one of three ways: positively, positively with qualifications, or negatively. "What do you particularly enjoy about your work?" Usually this question evoked a reference to children, either in an active sense such as "working or playing with children" or in a passive sense such as "watching them develop." "What things do you find frustrating or wish you could change?" The possible responses here include characteristics of the children, the parents, the facilities, the space, or the curriculum.

d) the administration of the program as regards the number of adults employed, help received from parents or volunteers, public support of the program, and the cost of the program.

e) the daily activities as described by the care agent.

f) the physical setting in the form of ratings of some aspects of the setting such as the use of space and pleasantness.

g) a sketch of the room.

The last three areas mentioned were designed to focus on many of the items found on the checklist. Hence, the interview questionnaire, as well as being a source of information used in the analysis, also served to assist the interviewer by providing an indication of the teacher's planned role in the children's interaction with their environment and by aiding the interviewer in recalling the setting.

The Checklist

Organized around the three main components of any group

program, physical setting, program activities, and interpersonal relationships, the checklist gave an indication of the facilities, activities, and relationships present. Many of the suggestions made by Harms (1970) were incorporated into the list which contained a number of specific items under the following categories:

Physical setting

- areas
- children's furniture
- quiet play
- active play
- constructing
- simulation
- music
- nature
- flexibility

Program Activities

- constant format
- single theme
- social learning
- gaining responsibility
- verbal intellectual learning
- field trips
- instructional sessions

Relationships

(feelings among those in the setting)

- teacher to child interaction
- child to teacher interaction
- child to child interaction
- disciplinary incident

In addition to indicating the presence or absence of each item the interviewer rated the children's interaction with their environment in each item as Level 1, Level 2, or Level 3 on the basis of the rationale presented in Chapter II. Level 3 was considered the most child-directed towards individual goals, the one with the highest

degree of involvement, the most thematic, or the most decentred with regard to time and space. In addition to the training sessions, each interviewer was given a handbook which gave specific examples of each level (See Appendix C).

Scoring the Checklist

A level score for each category on the checklist (listed on page 27) was calculated by adding the level scores of the individual items in each category. For example, if the area for large groups was scored Level 2 and the area for small groups was scored Level 3, the area category score was 5. Level scores for the physical setting, the program activities, and the interpersonal relationships were then calculated by adding the category scores under each heading.

The Physical Level Score was an indication of how the children interacted with the physical equipment and facilities in their environment. The score represented the sum of all category scores under the heading of physical setting.

The Program Level Score was an indication of how the children interacted with their environment from a program activities point of view. The score represented the sum of all category scores under the heading of program activities.

The Relationship Level Score was an indication of how the children and the adults interacted with each other. Since the lack of an altercation would have led to a lower child-to-child category score, the level of the altercation item was omitted from this category. For the same reason the discipline incident category was

excluded from the Relationship Level Score which represented the sum of the feeling category, the teacher-to-child category, the child-to-teacher category, and the child-to-child category.

The Total Level Score was an over-all indication of how the children interacted with their group environment. It represented the total of the Physical Level Score, the Program Level Score, and the Relationship Level Score.

The Physical Equipment Score was an indication of the variety of equipment and facilities in the environment. It represented the total number of "yes" responses to the items under the physical setting heading, with the exception of the flexible category which involved an element of people as well as equipment flexibility.

Inter-Rater Reliability of the Checklist Scores

To give an indication of the inter-rater reliability of the checklist, two or more interviewers were sent to four settings. Each interviewer independently completed the checklist. The resulting scores are shown in Table 3. There seemed to be a good degree of agreement among the interviewers. The largest discrepancies were found in the relationship level scores which were most susceptible to influence by personal feelings.

Hypotheses

Normative Factors

First H_0 : Children taking part in different types of programs have no differences in their mean scores on

Table 3

A Comparison of Scores Given to The Same
Settings by Different Interviewers

Setting	Interviewer	Physical Equipment Score	Level Scores			
			Physical	Program	Relationship	Total
1	A	18	31	38	35	104
	B	17	27	36	38	101
	C	18	39	38	44	121
2	D	19	31	38	53	122
	E	21	26	32	45	103
	F	15	26	39	56	121
3	G	10	22	41	34	97
	F	8	18	41	41	100
4	E	22	20	37	29	86
	A	22	26	21	43	90

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Second H_0 : Children in settings with adults with different types of training have no differences in their mean scores on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Individual Factors

Third H_0 : Children in settings with adults with different attitudes towards their job have no differences in their mean scores on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Fourth H_0 : Children in settings with adults with different attitudes towards children have no differences in their mean scores on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Fifth H_0 : Children in settings with adults who expressed different frustrations about their job have no differences in their mean scores on

- a) physical equipment
- b) physical level
- c) program level

- d) relationship level
- e) total level

Sixth H_0 : There is no relationship between the age of the adult and their mean scores on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Physical Factors

Seventh H_0 : There is no relationship between the physical equipment score and the score on

- a) physical level
- b) program level
- c) relationship level
- d) total level

Eighth H_0 : There is no relationship between the cost per month to the parent and the score on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Ninth H_0 : There is no relationship between the number of children and the score on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Tenth H_0 : There is no relationship between the children to adult ratio and the score on

- a) physical equipment
- b) physical level
- c) program level

- d) relationship level
- e) total level

Eleventh H_0 : There is no relationship between the use of space rating and the score on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Twelfth H_0 : There is no relationship between the pleasantness rating and the score on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Thirteenth H_0 : There is no relationship between the total square footage and the score on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Fourteenth H_0 : There is no relationship between the square footage per child and the score on

- a) physical equipment
- b) physical level
- c) program level
- d) relationship level
- e) total level

Interpersonal Interaction Factors

Fifteenth H_0 : There is no relationship between the level of the teacher to child interaction and the

- a) level of the child to teacher interaction
- b) level of the child to child interaction

Relationships Between the Factors

Sixteenth H_0 : There is no relationship between the physical level score and the

- a) program level score
- b) relationship level score
- c) total level score

Seventeenth H_0 : There is no relationship between the program level score and the

- a) relationship level score
- b) total level score

Eighteenth H_0 : There is no relationship between the relationship level score and the total level score.

Analysis of the Data

The information on the interview questionnaire and the checklist was coded and punched onto IBM cards.

A one-way analysis of variance was used to test each of the first five hypotheses which involved discrete variables. The MTS computer program ANOV₁₅ was used. The Scheffé Multiple Comparison of Means was used to test the significance of the differences between individual means. To test the remaining hypotheses, which involved continuous variables, a Pearson's product moment correlation matrix was calculated using the MTS computer program DEST₀₂.

The null hypotheses will be rejected at the .05 level of confidence.

CHAPTER IV

RESULTS

Hypothesis 1

As shown by the analysis of variance tables reported in Table 4, children taking part in different types of programs have significantly different scores on equipment, physical level, program level, relationship level, and total level.

Physical Equipment Score. School-board kindergartens' mean physical equipment score was significantly higher than that of one-activity programs, nursery schools, or bowling alleys and curling rinks. Playschools, day nurseries, school hospitals, and private kindergartens all had mean scores which were significantly higher than those of one-activity programs or bowling alleys and curling rinks. As the physical equipment score represents the variety of equipment present in the setting, the one-activity programs may be expected to score lower than other programs.

Physical Level Score. On mean physical level score, the school-board kindergartens were significantly higher than one-activity programs or bowling alleys and curling rinks. The physical level score is implicitly related to the physical equipment score because children with little equipment with which to interact necessarily score low on the physical level score.

Table 4
One-Way Analysis of Variance of Selected
Variables by Types of Program

Variable	Source of Variation	MS	df	F	P
Physical Equipment Score	Groups Error	195.07 17.64	7 79	11.06	.000001
Physical Level Score	Groups Error	818.45 130.30	7 79	6.28	.000009
Program Level Score	Groups Error	1082.76 92.30	7 79	11.73	.000001
Relationship Level Score	Groups Error	870.73 199.69	7 79	4.36	.000396
Total Level Score	Groups Error	7757.52 908.41	7 79	8.54	.000002

Program Level Score. The mean program level score of school-board kindergartens was significantly higher than those of one-activity programs, bowling alleys and curling rinks, or day nurseries; the mean program level score of private kindergartens was significantly higher than that of one-activity programs or bowling alleys and curling rinks; and the mean program level score of playschools, nursery schools, day nurseries, and school hospitals were all significantly higher than that of bowling alleys and curling rinks.

Relationship Level Score. School-board kindergartens and playschools were significantly higher than bowling alleys and curling rinks on mean relationship level score.

Total Level Score. Again, the school-board kindergartens scored higher than the one-activities program or the bowling alleys and curling rinks. Playschools, day nurseries, nursery schools, and school hospitals all had a significantly higher mean total level score than did the bowling alleys and curling rinks.

Hypothesis 2

The series of one-way analysis of variances reported in Table 5 show that all of the null hypotheses which involved the training of the director were tenable. That is, children in settings with adults with different types of training have no differences in their mean scores on physical equipment, physical level, program level, relationship level, or total level. Many of the adults with little formal training were involved in programs where they received much guidance and close supervision by knowledgeable individuals.

Hypothesis 3

With one exception, the null hypotheses which involved the adult's attitude towards her job were tenable. As shown in Table 6, the mean physical equipment scores were significantly different for different attitudes. The settings with directors who expressed a positive attitude with some qualifications had a significantly larger variety of equipment than those of directors who expressed a purely positive attitude. Perhaps these directors had a more realistic

Table 5

One-Way Analysis of Variance of Selected
Variables by the Training of the Director

Variable	Source of Variation	MS	df	F	P
Physical Equipment Score	Groups Error	57.01 26.87	5 65	2.12	0.0739
Physical Level Score	Groups Error	175.38 186.51	5 65	0.94	0.461
Program Level Score	Groups Error	21.49 133.96	5 65	0.16	0.976
Relationship Level Score	Groups Error	143.92 177.32	5 65	0.81	0.5456
Total Level Score	Groups Error	498.80 1126.21	5 65	0.44	0.81688

outlook and were working to improve their equipment.

Table 6
One-Way Analysis of Variance of Selected
Variables by the Director's
Attitude Towards her Job

Variable	Source of Variation	MS	df	F	P
Physical Equipment Score	Groups Error	149.25 31.85	2 72	4.69	0.012211
Physical Level Score	Groups Error	426.76 175.49	2 72	2.43	0.095062
Program Level Score	Groups Error	68.75 171.27	2 72	0.40	0.670860
Relationship Level Score	Groups Error	351.72 247.58	2 72	1.42	0.248255
Total Level Score	Groups Error	2235.78 1388.75	2 72	1.61	0.207014

Hypothesis 4

As shown in Table 7, the director's attitude towards children made a significant difference in mean physical level score, mean relationship level score, and mean total level score. In each of these areas the children in a setting with a director who expressed an active enjoyment of children scored significantly higher than those in a setting with a director who expressed a passive enjoyment of children. The null hypotheses regarding the attitude of the director towards children and the mean physical equipment score and the mean program level score were tenable.

Hypothesis 5

The one-way analysis of variances in Table 8 show that all of the null hypotheses regarding the director's frustrations with her job and the mean scores on physical equipment, physical level, program level, relationship level, and total level were tenable.

Hypothesis 6

The age of the adult was negatively correlated with all five of the scores (See Table 9). The negative correlations with the scores on physical equipment, program level, relationship level, and total level were all significant. These correlations may be influenced by the fact that many of the teachers in the school-board kindergartens were young and the school-board kindergartens tended to score high in both physical equipment and interaction levels or perhaps the younger teachers were more energetic and dynamic with the children.

Table 7

One-Way Analysis of Variance of Selected
Variables by the Director's
Attitude Towards Children

Variable	Source of Variation	MS	df	F	P
Physical Equipment Score	Groups Error	59.25 29.54	1 74	2.01	0.160919
Physical Level Score	Groups Error	1227.65 166.17	1 74	7.39	0.008178
Program Level Score	Groups Error	400.37 146.57	1 74	2.73	0.102616
Relationship Level Score	Groups Error	1347.56 197.67	1 74	6.82	0.010929
Total Level Score	Groups Error	7840.13 1168.49	1 74	6.71	0.011543

Table 8
One-Way Analysis of Variance of Selected
Variables by the Director's
Frustrations with her Job

Variable	Source of Variation	MS	df	F	P
Physical Equipment Score	Groups Error	59.55 31.45	5 62	1.89	0.108297
Physical Level Score	Groups Error	167.22 199.96	5 62	0.84	0.529016
Program Level Score	Groups Error	206.44 167.92	5 62	1.23	0.306177
Relationship Level Score	Groups Error	155.05 246.19	5 62	0.63	0.677646
Total Level Score	Groups Error	1469.29 1425.31	5 62	1.03	0.407505

Table 9

The Pearson Product Moment Correlations Between Physical Equipment Scores, Physical Level Scores, Program Level Scores, Relationship Level Scores, and Total Level Scores and Selected Variables

Variable	Physical Equipment Score	Level Scores		
		Physical	Program	Relationship
Age of the adult	-.221*	-.185	-.237*	-.239*
Physical equipment score	-	.829**	.630**	.568**
Cost per month	.137	.128	-.027	-.027
Number of children	.073	.092	.004	.081
Children to adult ratio	.051	.049	.153	.065
Use of space rating	.345**	.371**	.412**	.412**
Pleasantness rating	.366**	.478**	.439**	.552**
Total square footage	.053	.164	.193	.284**
Square footage per child	.005	.089	.105	.211*
Total				

* Correlation significant at the .05 level of confidence

** Correlation significant at the .01 level of confidence

Hypothesis 7

The physical equipment score was very highly correlated with the scores on physical level, program level, relationship level, and total level (See Table 9). The fact that the presence of a variety of equipment provides opportunities for interactions with the equipment helps to explain the correlation with the physical level score. The underlying influence upon all of the correlations may be that a director who was knowledgeable enough to provide a variety of equipment was also knowledgeable enough to foster interactions between the child and his environment in all respects. The rejection of this null hypothesis is in line with the findings of Kritchevsky and Prescott (1969).

Hypothesis 8

There was no significant correlation between the cost per month to the parent and the scores on physical equipment, physical level, program level, relationship level, or total level (See Table 9). However, many of the programs were subsidized, either directly or indirectly, and hence the cost to the parent does not represent the cost of the program.

Hypothesis 9

As shown in Table 9, there were no significant correlations between the number of children in the setting and the scores on physical equipment, physical level, program level, relationship level, or total level.

Hypothesis 10

As shown in Table 9, there was also no significant correlations between the children to adult ratio and the scores on physical equipment, physical level, program level, relationship level or total level. However, the ratio of children to adults varied little from setting to setting.

Hypothesis 11

The rating given to the use of space was significantly correlated to the scores on physical equipment, physical level, program level, relationship level, and total level (See Table 9). A well-planned setting may enhance the children's interactions with their environment or it may be that when the interviewer saw the children interacting at a high level he tended to rate the use of space as high.

Hypothesis 12

The pleasantness rating was significantly correlated to the scores on physical equipment, physical level, program level, relationship level, and total level. Again, a pleasant environment may enhance the children's interactions with their environment or it may be that when the interviewer saw the children interacting at a high level he tended to rate the pleasantness as high.

Hypothesis 13

As shown in Table 9, the total square footage was not significantly correlated to the physical equipment score, the physical level score, or the program level score but it was significantly related to

the relationship level score and the total level score.

Hypothesis 14

As shown in Table 9, the square footage per child was significantly related only to the relationship level score. As reported by Swift (1964) relationships may be better when children have more space.

Hypothesis 15

There were highly significant correlations between the level of teacher to child interaction and the level of child to teacher interaction; between the level of teacher to child interactions and the child to child interactions; and between the child to teacher interaction and the child to child interaction (See Table 10). These findings are in direct agreement with previous researchers (H. H. Anderson, Withall, Flanders) who concluded that teacher contacts set a pattern of interaction that spreads throughout the classroom.

Hypothesis 16

As shown in Table 11, the physical level score was significantly related to the program level score, the relationship level score, and the total level score.

Hypothesis 17

The program level score was significantly related to the relationship level score and to the total level score (See Table 11).

Hypothesis 18

As shown in Table 10, the relationship level score was

significantly related to the total level score.

Table 10

The Pearson Product Moment Correlations Between
the Level of Teacher to Child Interaction,
the Level of Child to Teacher
Interaction, and the Level of
Child to Child Interaction

Interaction Level Scores	Teacher to child	Child to teacher	Child to child
Teacher to child	-	.760**	.616**
Child to teacher	.760**	-	.739**
Child to child	.616**	.739**	-

**Correlation significant beyond the .01 level of
confidence.

Table 11

The Pearson Product Moment Intercorrelations
Between Physical, Program, Relationship,
and Total Level Scores

Level Scores	Physical	Program	Relationship	Total
Physical	-	.679**	.639**	.847**
Program	.679**	-	.754**	.899**
Relationship	.639**	.754**	-	.898**
Total	.847**	.899**	.898**	-

** Correlation significant beyond the .01 level of confidence.

CHAPTER V

CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS

Conclusions

1. The level at which preschool children interacted with their environment in a group setting was related to the type of program and the way in which the director expressed her enjoyment of children. Children in bowling alleys and curling rinks consistently interacted at a lower level than did children in other settings. Children in a setting with a director who enjoyed "working" or "playing" with children interacted at a higher level than did those with a director who enjoyed "watching" children. In addition, the level of interaction increased with an increase in the variety of equipment in the setting, the size of the setting in square feet, the number of square feet per child, the rating of the use made of the available space, and the rating of the pleasantness of the setting. Older adults tended to foster less interactions between the children and their environment than did younger adults.

2. The level of interaction between the children and their group environment was unrelated to the training of the director, the attitude of the director towards her job, the frustrations expressed by the director, the cost per month to the parents, the total number of children in the setting, and the size of the children to adult ratio.

3. When the teacher interacted at a high level with the children, they also interacted at a high level with both the teacher and each other. The teacher appeared to set a pattern of high or low interpersonal interaction which spread throughout the group.

4. The levels of interaction in the physical setting, the program activities, and the interpersonal relationships tended to be highly related. That is, settings which fostered high levels of interactions with one aspect of the environment fostered high levels of interaction with all aspects.

5. The variety of physical equipment in the preschool group setting was related to the type of program, the attitude of the director towards her job, the age of the director, the use made of the space, and the pleasantness of the setting. Bowling alleys and curling rinks had a smaller variety of equipment than did any of the other settings. One-activity programs also tended to have a smaller variety of equipment. Directors who liked their job but saw problems in their positions provided a greater variety of equipment than did those who did not mention the problem aspects. Settings with young directors, as well as pleasant well utilized settings, tended to provide a greater variety of equipment.

Limitations of the Study

1. The study was dependent upon each interviewer's ability to carefully and objectively observe and remember the interactions which took place within the setting.

2. The interviewer was required to make many subjective judgments when determining levels.

3. The inter-rater reliability was not clearly established.

4. Each setting was observed only once with the implicit assumption that the interviewer observed a typical day and that the presence of the interviewer had no effect upon the setting.

5. The training and the age of the director were estimated in some cases.

Recommendations for Further Study

The study should be repeated making two modifications:

1. The training of the interviewers should be rigorous with many practice sessions and a thorough grounding in the theory of the levels.

2. A manageable number of interviewers should be selected and the inter-rater reliability clearly established by having the same interviewers observe a number of settings.

Implications

In selecting a group program which will foster interactions between preschool children and their environment, the following qualities are desirable: a large variety of equipment and activities, a large setting with abundant space for each child, pleasant, well used space, and a director who expresses an active enjoyment of children. All of these qualities are easily ascertained and hence these points should be useful both to parents and licensing agencies.

SELECTED REFERENCES

SELECTED REFERENCES

- Anderson, H. H. The measurement of domination and socially integrated behavior of kindergarten children and teachers. Genetic Psychology Monographs, 1939a, 21, 287-385.
- Bandura, A., & Huston, A. C. Identification as a process of incidental learning. Journal of Abnormal Social Psychology, 1961, 63, 311-318.
- Bruner, J. S. The relevance of education. Toronto: George J. McLeod, 1971.
- Child Care in Edmonton, Part I. Edmonton: Canadian Committee on Early Childhood, 1972.
- Child Care in Edmonton, Part II. Edmonton: Canadian Committee on Early Childhood, 1972.
- English, B., & English, C. A comprehensive dictionary of psychological and psychoanalytical terms: A guide to usage. New York: Longmans, 1958.
- Erikson, E. H. Childhood and society. New York: W. W. Norton, 1950.
- Evans, E. D. Contemporary influences in early childhood education. Early Childhood Education Series. Toronto: Holt, Rinehart and Winston, 1971.
- Flanders, N. A. Teacher influence, pupil attitudes and achievement. U.S. Department of Health, Education, and Welfare, Office of Education, 1965.
- Flanders, N. A., Morrison, B. M., & Brode, E. L. Changes in attitudes during the school year. Journal of Educational Psychology, 1968, 50, 334-338.
- Gibb, J. R. Sociopsychological processes of group instruction. National Society for the Study of Education Yearbook, 1960, 115-135.
- Harms, T. Evaluating settings for learning. Young Children, 1970, 304-306.
- Harvey, O. J., White, B. J., Prather, M., Alter, R., and Hoffmeister, J. Teachers' belief systems and preschool atmospheres. Journal of Educational Psychology, 1966, 57, 371-381.

- Hess, R. D., & Shipman, V. C. Maternal influences upon early learning: The cognitive environments of urban preschool children. In R. D. Hess & R. D. Bear, (ed.), Early education: Current theory, research and action. Chicago: Illinois: Aldine Publishing, 1969.
- Getzels, J. W., & Thelen, H. A. The classroom group as a unique social system. National Society for the Study of Education Yearbook, 1960, 53-82.
- Katz, L. G. Teaching in preschools: Roles and goals. Children, 1970, 17, 43-48.
- Kessen, W. The child. New York: John Wiley & Sons, 1965.
- Klein, M. F., & Novotney, J. M. American nursery schools: Help, hindrance, or enigma? The National Elementary Principal, 1971, 51, 84-91.
- Kohlberg, L. Early education: A cognitive-developmental view. Child Development, 1968, 39, 1013-1062.
- Kritchevsky, S., & Prescott, E. Planning environments for young children: Physical space. Washington, D.C.: National Association for the Education of Young Children, 1969.
- Lehman, C. J. Analyzing and managing the physical setting of the classroom group. National Society for the Study of Education Yearbook, 1960, 59, 253-267.
- Lewin, K., Lippitt, R. & White, R. K. Patterns of aggressive behavior in experimentally created social climates. Journal of Social Psychology, 1939, 10, 271-299.
- Moustakas, C. E. The authentic teacher. Cambridge, Mass.: Howard A. Doyle, 1966.
- Moustakas, C. E., & Berson, M. P. The young child in school. New York: Whiteside and Morrow, 1956.
- Perkins, H. V. The effects of climate and curriculum on group learning. Journal of Educational Research, 1950, 44, 269-286.
- Prescott, E., & Jones, E. Group day care as a child-rearing environment. Pacific Oaks College, Pasadena, Calif.: Children's Bureau, Social Security Administration, U. S. Department of Health, Education, and Welfare, 1967.

- Prescott, E., & Jones, E. Day care for children: Assets and liabilities. Children, 1971, 18, 54-56.
- Reichenberg-Hackett, W. Practices, attitudes and values in nursery group education. Psychological Reports, 1962, 151-172.
- Ripple, R. E., & Rockcastle, V. N. (eds.). Piaget rediscovered: A report of the conference on cognitive studies and curriculum development. Ithaca: Cornell University School of Education, 1964.
- Sears, P. S., & Dowley, E. M. Research on teaching in the nursery school. In Gage, N. L. (ed.), Handbook of research on teaching. Chicago: Rand McNally, 1963.
- Siegel, A. E., & Kohn, L. G. Permissiveness, permission, and aggression: The effect of adult presence or absence on aggression in children's play. Child Development, 1959, 30, 131-141.
- Smothergill, N. L., Olson, I., & Moore, S. G. The effects of manipulation of teacher communication style in the preschool. Child Development, 1971, 42, 1229-1239.
- Swift, J. W. Effects of early group experience: The nursery school and day nursery. In Hoffman, M. L., & Hoffman, L. W. (eds.), Review of Child Development Research, Vol. I. New York: Russell Sage Foundation, 1964.
- Thompson, G. G. The social and emotional development of preschool children under two types of educational programs. Psychological Monographs, 1944, 56, Whole No. 258.
- Walberg, H. J., & Anderson, G. J. Classroom climate and individual learning. Journal of Educational Psychology, 1968, 50, 414-419.
- Withall, J. The development of a technique for the measurement of social-emotional climate in the classroom. Journal of Experimental Education, March, 1949, 17, 347-361.
- Withall, J. Evaluation of classroom climate. Childhood Education, March, 1969, 403-408.

APPENDIX A

Interview Questionnaire

--INTERVIEW QUESTIONNAIRE --

Care Source _____ Date _____ Time _____ to _____

Care Agent

M/F Training _____ Age _____ First Language _____
(Estimate) (Estimate) (Estimate)

Numbers of children _____ Age Range _____ Total number of adults _____

What is it like (managing the lives) of _____ children?
(looking after)
(teaching)

What do you particularly enjoy about your work?

What things do you find frustrating or wish you could change?

What things do you dream about for your program?

Do you receive any help from parents or volunteers?

Is the program supported by donations _____
public grant _____
parent fees _____

If fees - how is the amount determined? _____

Amount parents pay for service _____
(give range)

What does it cost to care for a child per day _____ or per
month _____
(estimate)

Would you like further support from public sources _____

If further support was forth coming, what regulations would they
insist upon. _____

What regulations would you find reasonable to follow? _____

What kinds of activities do the children perform during a day?
(estimate amount of time spent on each activity).

What kinds of things do children play

1, on their own _____ (list)

2, with others _____ (list)

Do you ever enter into their play _____
(give example)

Do they listen to music _____

stories _____

watch TV _____

do crafts _____

do gymnastics, dance _____

go on walks or visits in the community _____ (explain)

Do you take the child with you when shopping or visiting someone _____

Do they take naps _____ where _____ for how long _____

Do children eat lunch while in your program _____

Who prepares lunch _____

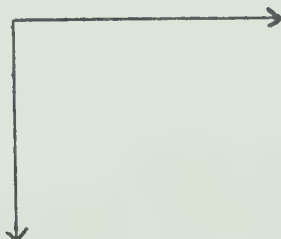
If possible ask questions that continue the rapport and help you
complete the check list. _____

Thank you for your time. You will be hearing from us when we
complete our source book for parents.

DRAWING OF MAIN ACTIVITY AREA.

Number of lights - brightness		1 poor	2 adequate	3 ideal
Use of space	1 poor	2 adequate	3 efficient	
Pleasantness	1	2	3 great to be there	
Cupboards	1 not present	2 present teacher uses	3 child uses	(individual spaces available)
Bulletin Boards	1 not present	2 present teacher displays	3 child displays	(does child pin up himself, are the pictures different)
Sink	1 not present	2 Teacher used	3 child used	

Sketch room -- estimate size



APPENDIX B

Checklist

CHECKLIST

FORM C

Physical Setting	Present		Level		
	yes	no	1	2	3
Areas					
Large					
Small					
Furniture					
Children's furniture					
Mirror					
Rocking chair					
Quiet Play					
Books, picture stories					
Magazines					
Water play tub					
Other					
Active Play					
Group games					
Large equipment					
Wheel toys					
Large blocks					
Partitions					
Other					
Construction					
Art and graphic materials					
"Junk"					
Wood materials					
Puzzles - matching games					
Shapes for prehension					
Other					
Simulation					
House, kitchen store					
Playhouse, playwork "stuff"					
Dress-up clothes - girls'					
Work clothes - boys'					
Other					

Physical Setting (con't)	Present		Level		
	yes	no	1	2	3
Music and Drama					
Piano-autoharp					
Rhythm instruments					
Record player					
Radio and television					
Other					
Nature-Science					
Plants					
Animals					
Adults and equipment flexible					
<hr/>					
Program Activities					
Constant format					
Single Theme					
Social learning					
Sharing and waiting for other					
Compromise					
Co-operation					
Other					
Gaining Responsibility					
Dressing and undressing					
Washing hands - bathroom					
Jobs					
Other					
Field Trips					
List last two					

Program Activities (con't)	Level		
	1	2	3

Verbal intellectual learning

Reading books by child			
Reading books by teacher			
Flannel board and play acted stories			
Conversations			
Questions asked by child			
Questions asked by teacher			
Word games			

Instructional Sessions

Objectives specified			
Multisense format			
Follow-up planned for			
Questions asked			
Questions answered			
Growth goals specified for selected children			

Relationships	Level		
	1	2	3

Children's feelings towards teacher			
Teacher's feelings towards children			
Interviewer's feelings towards teacher			

Interaction (teacher to child)

Names used			
Eye contact			
Postural orientation			
Touch			
Encouragement/praise			
Help given			
Talking content			

Relationships (con't)	Level		
	1	2	3
Interaction (child to teacher)			
Names used			
Eye contact			
Postural orientation			
Touch			
Encouragement/praise			
Help			
Talk content			
Interaction (child with child)			
Names			
Eye contact			
Postural orientation			
During play			
During instruction			
Altercations			
Disciplinary Incident (specify below)			
Teacher response			
Group response			
Child's response			

APPENDIX C

A Handbook for Interviewers

HANDBOOK FOR INTERVIEWERS

Physical Setting

Item	Level of Use		
	1	2	3
<u>Childrens furniture</u>			
mirror	present, child size, rarely used	checks and looks	spontaneous theme, child carries to completion
rocking chair	present, child size, rarely used	adult and child size children use it, adults use it	Children "rock baby". Adults use to console child
<u>Quiet play and reading</u>			
books-picture stories magazines	present, used infrequently	used after teacher direction. follows ideas of teacher	spontaneously used, child works to completion, looks for certain things
water play tub			
<u>Active play</u>			
group games	game started children enjoy for a while then disappear without definite finish	teacher has chairs moved. Structures game. start ...finish. Children involved	children play own game, move equipment. Teacher helps. They all have a great time
large equipment climbing bars	fend-off possession	explore properties of equipment	relate to theme game of tag or follow the leader
wheels and large blocks	fend-off possession	explore properties of equipment	relate to theme

	1	2	3
partitions	present but unmoved	teachers move for lesson	child moves for themes
<u>Constructing and figuring</u>			
art, graphic materials	equipment available. children use infrequently or fend off other	teacher directs children, they follow to complete- ness. Work taken home pinned up	children develop own ideas. Complete to child's satis- faction. Pinned up by child
"junk"	"	explore properties of	children develop own ideas. Complete to own satisfaction
wood materials	"	"	"
blocks	"	"	"
puzzles	"	"	"
shapes	"	"	"
<u>Housekeeping</u>			
house kitchen store playhouse	toys present	mainte- nance sweeping discip- linary, ironing	theme "we are going to have a party". Dads coming home Teaching, we're making a bridge
dress up clothes (girls)	clothes present	child wears clothes	develops play theme
work clothes (boys)	"	"	"
<u>Music and Dance</u>			
story telling drama piano, autoharp	object present little action	songs used children follow	teacher and children use in story, put on program, planning

	1	2	3
rhythm	object present little action	children follow teacher direction	children play with spontaneously
record player	"	"	"
radio - TV	unstructured viewing	teacher planned all watching Sesame Street "cause its good"	child/teacher planned
<u>Nature science</u>			
plants	they are in the room, no interaction from the children	children look at and watch inter- mittently	children care for
animals	"	"	children give name to animals
<u>Adults flexible</u>			
	adults generally absent or on call depend- ing on need (eg. alter- cation)	adults present serve in overseeing, guiding capacity	adults involved with activities in each area

Program Activity

	1	2	3
Format constant	start day, go home	activities each period of day specified. Teacher directs change	children move through the day seemingly on their own.
Single theme	teacher determined child follows	teacher determined, child participates	setting / child determined
<u>Social learning</u>			
sharing and waiting	"	teacher suggests child accepts willingly	children offer alternatives
compromise	"	"	"
co-operation	"	"	"
<u>Gaining responsibility</u>			
dressing	teacher leads or determines in dressing or undressing	child leads - teacher helps	child manages on his own
washing	"	"	"
jobs	teacher does child follows teacher gives step by step guidance	child does at teachers suggestion	child spontaneously initiates task
<u>Verbal intellectual</u>			
reading books by child	teacher directed looks at book minimally involved	Teacher suggested absorbed in book enjoys it	Absorbed in book on own, enjoys it

	1	2	3
reading books by teacher	reads to children who sit quietly	teacher reads story shows pictures	teacher reads shows pictures asks about story children volunteer answers
flannel board and play acted stories	teacher determined child follows	child partici- pates	setting / child determined
conversations T C	teacher tells and describes	teacher asks and comments about activity child does	child and teacher carry discussion beyond activity
C T	child follows and asks for clarification	child asks beyond clarification comments	"
C C	minimal talk non-verbal "pushes"	children talk about lesson, ask for clarifi- cation	conversation goes beyond lesson
<u>Field trips</u>	Go to zoo place specified	Field trip tied in with topic children have been studying - topic specified	Field trip followed up with special activities for specific children child's needs specified
<u>Instructional (T C) Sessions</u>			
objectives specified	vaguely specified	specified for general age group	specified for need, ie. parti- cular skills and/or for particular children
multi-sense format	shows pictures	shows pictures makes sounds, has children imitate	shows and makes sounds, children voluntarily participate

	1	2	3
follow up	unspecified	specified children follow	children initiate teacher guides
questions T → C	few questions asked	question related and direct, child listens	children ask, questions relevant to teacher goals
answers C → T	not related to question "that's nice" "after awhile"	child answers specifi- cally	child responds using information for further talk or activities
growth goals	not specified or good for all children	specified for age level	each child is considered individually

Relationships

	1	2	3
Childrens feelings toward agent	Generally none excepting at activity change points or when agent calls for attention	Listens to, complies with asks, tells, shows interest	converses with smiles, enjoys shows satisfaction
Agent's feelings	general indifference or irritation	direct and matter of fact helpful to children	converses with children, laughs frequently, seems to enjoy them
your feelings toward	feel somewhat negative toward	feel friendly toward	enjoy being with
(Pick event which you feel typifies activities present during your visit)			
Interaction			
(C → T)			
(T → C)			
(C → C)			
Names used	"the teacher" "hey you"	teachers name child's name	teachers and child's name with warmth
Eye contact	none	look at one another, but no smile from either	C ↔ T smile, mutual

	1	2	3
postural orientation	teacher towers above child or is turned away from	teacher and child orientated toward one another but a feeling of distance	teacher and child on same plane feeling of closeness
<u>Interaction (C → C)</u>			
during play	tell friend off	show, ask participate	answer, assist contribute
Instruction	ignore lesson	follow, copy, question	assist, co-operate
Altercations	"squared off" until teacher arrives, group facilitated	"squared off" until teacher arrives, no group facilitation	partial solutions offered prior to teachers arrival
<u>Disciplinary Incident</u>			
teacher's response	punitive physical restriction	withdraws child from setting	redirects child's attention, uses logic, child not necessarily removed from setting
child's response	resists with anger or fear	withdrawal, feels put upon, partial compliance with redirection	participates in redirection with former foe.
group response	group fosters altercation	group aware of difficulty (calls teacher) but not involved otherwise	group offers solution to children and to teacher

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